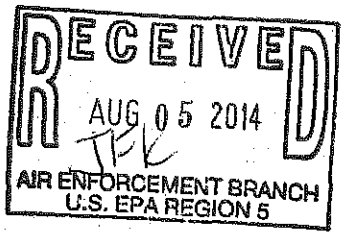
HERITAGE
THERMAL SERVICES

HERITAGE THERMAL SERVICES
1250 St. George Street
East Liverpool, Ohio 43920-3400
Phone: 330-385-7337
Fax: 330-385-7813
www.heritage-thermal.com

OHSAS 18001: 2007
ISO 14001: 2004
ISO 9001: 2008



July 31, 2014
VIA UPS and OEPA AIR SERVICES

Mr. George Czerniak, Chief (UPS)
U.S. EPA Region V
Air Enforcement and Compliance Assurance Branch
Mail Code AE-17J
77 West Jackson
Chicago, IL 60604

Mr. Erik Bewley (Air Services)
OEPA-DAPC-NEDO
2110 E. Aurora Road
Twinsburg, OH 44087

RE: HERITAGE THERMAL SERVICES
SEMI-ANNUAL STARTUP, SHUTDOWN, AND MALFUNCTION REPORT &
SEMI-ANNUAL EXCESS EMISSIONS AND CMS REPORT

Greetings:

Please find enclosed a written report entitled *Semi-Annual Startup, Shutdown, and Malfunction Report* and *Semi-Annual Excess Emission and CMS Report* for Heritage Thermal Services. These reports are required by 40 CFR 63.10 and cover the time period of January 1, 2014 through June 30, 2014.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are certain penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Thank you and if you have any questions or comments, please call me at the above number.

Sincerely,

Stewart Fletcher
General Manager
Heritage Thermal Services

SEMI-ANNUAL STARTUP, SHUTDOWN, AND MALFUNCTION REPORT
&
SEMI-ANNUAL EXCESS EMISSION AND CMS REPORT

For

Heritage Thermal Services

July 31, 2014

Section I – General Information

A. Facility Information

Facility ID:	02-15-02-0233
Responsible Official's Name / Title:	Stewart Fletcher General Manager
Street Address:	1250 Saint George Street
City:	East Liverpool
State:	Ohio
Zip Code:	43920
Facility Name:	Heritage Thermal Services
Facility Local Contact Name:	Vincent Waggle Environmental Engineer

B. Relevant standard(s) or other requirement(s) that is/are the basis for this report:

63.10(d)(5)(i) – Periodic Startup, Shutdown, and Malfunction Reports

C. Are you requesting a waiver of recordkeeping and/or reporting requirements under the applicable relevant standard(s) in conjunction with this report?

☐ Yes ☒ No

If you answered yes, you must submit the application for a waiver of recordkeeping and/or reporting requirements together with this report. The application for waiver should include whatever information you consider useful to convince the Administrator that a waiver of recordkeeping or recording is warranted. (63.10(f)(3)

Section II – Certification

Based upon information and belief formed after a reasonable inquiry, I as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Stewart Fletcher, General Manager

Signature: _____ Date: 7-31-14

Section III – Startup, Shutdown, and Malfunction Reports

A. Startup, Shutdown, or Malfunction Actions

All actions taken by Heritage Thermal Services during startup, shutdown, or malfunction events during the reporting period of **January 1, 2014 through June 30, 2014** were consistent with the procedures specified in the facility's Startup, Shutdown, and Malfunction Plan.

B. Malfunctions

Please find in the table below a list of each malfunction, the durations, and a brief description of the type of malfunction that occurred during the reporting period of **January 1, 2014 through June 30, 2014.**

See next page for completed table

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	1/2/2014 14:11	1/2/2014 15:10	59.28	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
THC	1/10/2014 20:43	1/10/2014 21:42	58.51	Malfunction Customer Packaging Error	Improper customer packaging caused combustion upset and THC.	Restarted unit. Contacted customer.
THC	1/11/2014 16:34	1/11/2014 16:58	24.43	Malfunction Lance Purge	Unexpected plug and purge of lance caused combustion upset and THC.	Cleared lance. Restarted unit
THC	1/17/2014 17:14	1/17/2014 18:14	60.10	Malfunction Lance Plugging	Unexpected plug and purge of lance caused combustion upset and THC.	Cleared lance. Restarted unit
THC	1/17/2014 18:36	1/17/2014 19:35	58.39	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
ESP Field #1 Current	1/26/2014 14:05	1/26/2014 15:34	89.13	Malfunction Ash Build-up	Unexpected ash build-up on ESP field led to drop in field current.	Stopped feeds. Increased rapping.
THC	1/30/2014 4:58	1/30/2014 5:59	61.00	Malfunction Lance Plugging	Unexpected plug and purge of lance caused combustion upset and THC.	Cleared lance. Restarted unit
THC	2/5/2014 13:25	2/5/2014 14:24	59.07	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
ESP Field #1 Current	2/8/2014 15:01	2/8/2014 15:33	32.12	Malfunction Ash Build-up	Ash build-up caused reduced power to the ESP fields.	Increased rapping. Reduced load.
THC	2/9/2014 12:42	2/9/2014 12:43	1.08	Malfunction Lance Plugging	Lance plugging and unexpected purge caused poor combustion.	Cleared lance. Restarted unit.
THC	2/11/2014 23:12	2/12/2014 0:12	59.58	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
SDA ECIS Flow	2/19/2014 17:30	2/19/2014 17:38	7.49	Malfunction - ECIS Screw Plugged	Plugging of the ECIS screw caused flow loss.	Cleared screw. Restarted unit.
THC	2/21/2014 15:05	2/21/2014 16:05	59.28	Malfunction Customer Packaging Error	Improper customer packaging caused combustion upset and THC.	Restarted unit. Contacted customer.
THC	2/24/2014 17:40	2/24/2014 18:39	58.59	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
THC	3/22/2014 9:28	3/22/2014 10:27	58.54	Malfunction Customer Packaging Error	Improper customer packaging caused combustion upset and THC.	Restarted unit. Contacted customer.
THC	3/27/2014 15:50	3/27/2014 16:14	23.57	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	3/31/2014 3:23	3/31/2014 4:21	57.19	Malfunction Lance Plugging	Lance plugging and unexpected purge caused poor combustion.	Cleared lance. Restarted unit.
THC	4/3/2014 20:02	4/3/2014 20:48	45.53	Malfunction Lance Plugging	Lance plugging and unexpected purge caused poor combustion.	Cleared lance. Restarted unit.
THC	4/9/2014 17:23	4/9/2014 18:22	58.51	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
THC	4/19/2014 14:51	4/19/2014 15:50	58.53	Malfunction Lance Plugging	Lance plugging and unexpected purge caused poor combustion.	Cleared lance. Restarted unit.
THC	4/25/2014 17:20	4/25/2014 18:17	56.42	Malfunction Lance Plugging	Lance plugging and unexpected purge caused poor combustion.	Cleared lance. Restarted unit.
THC	4/26/2014 1:29	4/26/2014 2:27	57.50	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
Total PB Flow	4/28/2014 11:58	4/28/2014 12:38	40.09	Malfunction Scrubber Maintenance	Unit taken off waste to repair scrubber leak.	WFCO initiated for repairs. Repaired piping.
Total PB Flow	5/1/2014 9:19	5/1/2014 10:42	82.54	Malfunction Scrubber Maintenance	Unit taken off waste to repair scrubber leak.	WFCO initiated for repairs. Repaired piping.
Total PB Flow	5/1/2014 10:58	5/1/2014 11:09	10.57	Malfunction Scrubber Maintenance	Unit taken off waste to repair scrubber leak.	WFCO initiated for repairs. Repaired piping.

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
SCC Pressure Using Seals	5/12/2014 3:51	5/12/2014 3:52	0.35	Malfunction Scrubber Pumps	Failure of scrubber pumps caused ID Fan stop.	Repaired pumps. Restarted unit.
RJ DP	5/12/2014 3:59	5/12/2014 5:03	63.07	Malfunction Scrubber Pumps	Failure of scrubber pumps caused ID Fan stop.	Repaired pumps. Restarted unit.
Scrubber ECIS Flow	5/13/2014 0:17	5/13/2014 0:50	32.56	Malfunction Power Failure	Storm caused a power outage causing shutdown of ECIS.	Restored power. Restarted unit.
ESP Field #1 Current	5/15/2014 16:07	5/15/2014 16:52	44.53	Malfunction Ash Build-up	Ash build-up on ESP field caused low current	Manual WFCO. Increased rapping.
THC	5/15/2014 18:39	5/15/2014 19:28	49.01	Malfunction Lance Plugging	Direct tanker lance plugged and purged causing THC spike.	Cleaned lance. Restarted unit.
THC	5/17/2014 10:39	5/17/2014 11:38	58.53	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset caused THC event.	Restarted unit. Reviewed waste feeds
THC	5/27/2014 10:45	5/27/2014 11:44	58.47	Malfunction Lance Slagging	Slag buildup on lance caused poor combustion.	Cleaned lance. Restarted unit.
THC	5/28/2014 14:35	5/28/2014 14:46	10.54	Malfunction Lance Slagging	Slag buildup on lance caused poor combustion.	Cleaned lance. Restarted unit.
THC	5/28/2014 16:14	5/28/2014 17:14	59.57	Malfunction Lance plugging	Hi BTU lance plugged and purged causing poor combustion	Cleared lance. Restarted unit.
THC	5/29/2014 18:32	5/29/2014 19:18	45.59	Malfunction Lance plugging	Sludge lance plugged and purged causing poor combustion	Cleared lance. Restarted unit.

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
SCC Temperature	6/1/2014 17:39	6/1/2014 17:48	8.52	Malfunction Tank Layering	Unexpected tank layering caused temperature loss.	Introduced additional fuel. Restarted unit.
SCC Pressure Using Seals	6/2/2014 3:50	6/2/2014 3:51	0.30	Malfunction Clinker Fell	Small ash fall caused brief and sudden pressure spike.	Maintained draft. Restarted unit.
ESP Field #1 Current	6/17/2014 0:49	6/17/2014 1:42	53.14	Malfunction Excess Ash Build-up	Excessive ash build up on ESP plates caused low current	Manual WFCO. Increased rapping
ESP Field #1 Current	6/17/2014 12:24	6/17/2014 13:13	48.55	Malfunction Excess Ash Build-up	Excessive ash build up on ESP plates caused low current	Manual WFCO. Increased rapping
THC	6/26/2014 3:33	6/26/2014 4:32	58.49	Malfunction Lance Plugging	Unexpected plug and purge of lance caused poor combustion.	Cleared lance. Restarted unit.
THC	6/28/2014 10:05	6/28/2014 11:03	58.04	Malfunction Customer Packaging Error	Improper customer packaging caused combustion upset and THC.	Restarted unit. Contacted customer.

C. Startup, Shutdown, or Malfunction Plan Revision History

DATE	Revision Number	Comment
9/30/2003	0	Initial Plan
2/27/2004	1	ESP OPLs added. Malfunction list updated.
6/23/2005	2	Revised section on operating modes.
10/27/2006	3	RCRA Permit modifications. Malfunction list updated.
3/15/2007	4	Malfunction list updated and comments added addressing instances beyond the operator's control.
6/6/2007	5	Malfunction list updated and further comments added addressing instances beyond the operator's control.
10/16/2007	6	Corrected minor deficiencies noted by OEPA.
9/1/2008	7	Revised to reflect facility name change
6/12/2009	8	This revision included, in Section 1.6.3.1, more detailed descriptions of the most common malfunction events that occur at the facility. It also included a description of data collection procedures during times when residence time expires while an exceedance event is taking place in Section 1.6.3.
2/9/2011	9	Revision created to reflect OPL changes resulting from the MACT CPT completed in 2010. Additionally, new malfunctions were added to Table 2-2.
5/1/2011	10	Revision incorporated a discussion of the exceedance investigation process and procedures. Table 2-2 was also slightly revised to include addition malfunctions.
7/5/2012	11	Revision 11 (7/5/2012) created to improve language surrounding the reporting and documentation during startup and shutdown events.
10/15/2013	12	Revision 12 (10/15/2013) created to account for facility name change.

SEMI-ANNUAL EXCESS EMISSION AND CMS REPORT

Section I – General Information

A. Facility Information

Facility ID:	02-15-0233
Responsible Official's Name / Title:	Stewart Fletcher / General Manager
Street Address:	1250 Saint George Street
City:	East Liverpool
State:	Ohio
Zip Code:	43920
Facility Name:	Heritage Thermal Services
Facility Local Contact Name:	Vincent Waggle Environmental Engineer

B. Relevant standard(s) or other requirement(s) that is/are the basis for this report:

63.10(e)(3) – Excess Emissions and Continuous Monitoring System Performance Report

C. Are you requesting a waiver of recordkeeping and/or reporting requirements under the applicable relevant standard(s) in conjunction with this report?

☐ Yes ☒ No

If you answered yes, you must submit the application for a waiver of recordkeeping and/or reporting requirements together with this report. The application for waiver should include whatever information you consider useful to convince the Administrator that a waiver of recordkeeping or recording is warranted. (63.10(f)(3))

D. Check the box that corresponds to the reports you are submitting:

☐ Summary Report Only (Complete Sections II and IV)

☒ Excess Emission and CMS Performance Report and Summary Report (Complete Sections II, III, and IV).

Section II – Certification

Based upon information and belief formed after a reasonable inquiry, I as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Stewart Fletcher, General Manager

Signature: _____ Date: 7-31-14

Section III – Excess Emissions and CMS Performance Report

A. Excess Emissions

1. Have any excess emissions or exceedances of a parameter occurred during this reporting period?
☒ Yes ☐ No

2. If you answered yes, complete the following table for each period of excess emissions and/or parameter monitoring exceedances, as defined in the relevant standard(s), that occurred during periods other than startups, shutdowns, and/or malfunctions of your affected source. (63.10(c)(7)-(11))

See next page for completed table.

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	1/6/2014 19:55	1/6/2014 20:54	59.09	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit. Revised procedure.
THC	1/16/2014 3:21	1/16/2014 4:22	60.26	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit.
THC	1/28/2014 19:14	1/28/2014 19:27	12.26	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit. Revised feed instructions
SDA ECIS Flow	2/18/2014 8:17	2/18/2014 8:43	26.37	Operator Error - Poor Operation	Waste feed initiated without sufficient ECIS flow.	Restarted unit. Re-trained operators.
THC	2/22/2014 0:30	2/22/2014 1:30	59.59	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit. Reduced charges.
THC	2/26/2014 10:53	2/26/2014 11:47	54.15	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit. Reduced charges.
THC	3/4/2014 0:02	3/4/2014 0:57	54.15	Operator Error Feed Weight	Lance plugging and unexpected purge caused poor combustion.	Restarted unit. Reduced charges.
RJ DP	3/26/2014 10:34	3/26/2014 11:25	51.10	Operator Error Poor operation	Operator inadvertently caused WFCO by selecting wrong transmitter.	Error corrected. Restarted unit
THC	4/11/2014 12:04	4/11/2014 13:03	58.53	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Changed feed prep. Restarted unit.
THC	4/14/2014 18:31	4/14/2014 19:30	58.53	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Solidify material. Restart unit.
THC	4/19/2014 6:35	4/19/2014 7:35	59.58	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Changed feed prep. Restarted unit.

Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	4/24/2014 21:27	4/24/2014 22:26	59.24	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Changed feed prep. Restarted unit.
THC	4/27/2014 15:14	4/27/2014 16:14	60.02	Operator Error Feed Prep	Improper waste preparation led to combustion upset and THC.	Restarted unit. Requested more info from customer.
SCC Temperature	4/28/2014 10:41	4/28/2014 10:54	12.38	Operator Error Poor Operation	Operator failed to maintain operating temperature.	Temperature regained. Unit restarted. Operator re-trained.
THC	5/17/2014 21:37	5/17/2014 22:37	60.00	Operator Error Feed Prep	Improper feed prep led to poor combustion and THC event.	Corrected problem. Restarted unit.
Scrubber pH	5/18/2014 6:41	5/18/2014 7:38	56.54	Operator Error Poor Maintenance	Poor maintenance led to caustic pump failure and pH loss.	Corrected problem. Restarted unit.
THC	5/28/2014 18:50	5/28/2014 19:46	55.49	Operator Error Improper Line Purge	Operator flushed lance at too high rate causing THC.	Reduced flow. Restarted lance.
THC	5/29/2014 10:42	5/29/2014 11:10	28.08	Operator Error Poor Operation	Poor lance control caused poor combustiobn and THC.	Steadied lance flow. Restarted unit.
THC	5/29/2014 14:03	5/29/2014 14:23	19.52	Operator Error Poor Operation	Overfeed of direct burn material caused poor combustion and THC.	Reduced flow. Restarted unit.
THC	6/29/2014 17:01	6/29/2014 18:01	60.03	Operator Error Feed Mix	Poor feed mix led to poor combustion and THC.	Restarted unit. Spaced out feeds.

B. CMS Performance

1. Has a CMS been inoperative (except for zero/low-level and high-level checks), out of control (as defined in 63.8(c)(7)(i)), repaired, or adjusted during this reporting period? ☐ Yes ☒ No

2. If you answered yes, complete the following table for each period a CMS was out of control, repaired, or adjusted: (63.10(c)(5)-(6), (10)-(12); 63.8(c)(8).

CMS Type	Mfg	Process ID	Start Date	Completion Date	Nature & Cause of Malfunction (if any)	Corrective Actions Taken or Preventative Measures Adopted	Nature of Repairs or Adjustments Made to Inoperable or OOC CMS
Wet O2	Ametex	Stack monitor #2	5/12/2014	5/13/2014	Data Communication	Replaced data circuit	Hardware replacement

3. Indicate the total process operating time during the reporting period. (63.10(c)(13))

Total process operating time (days):

Days in reporting period:	181
Facility total process operating time (days):	170.36
Total days on waste:	166.79
Total days on fuels:	3.58

Section IV – Summary Report – Gaseous and Opacity Excess Emissions and CMS Performance

A. Report Date and Submittal Reporting Period

Indicate the reporting period covered by this submittal and the date of this summary report. (63.10(e)(3)(vi))

Reporting Period beginning date	Reporting Period ending date	Summary Report Date
January 1, 2014	June 30, 2014	July 31, 2014

B. Process Description and Monitoring Equipment Information

Complete the following process description and monitoring equipment information table for each affected source process unit:

Total operating time of affected source during the reporting period (days)
240,176 minutes of unit burning/ retaining hazardous waste; 5,148 minutes on virgin fuels.

Process unit name
Rotary Kiln Incineration System

Process unit description
Rotary kiln and ancillary equipment for combustion of hazardous wastes.

Emission and/or operating parameter limitations specified in the relevant standards
See Table 1 and 2 below.

TABLE 1 – APPLICABLE EMISSIONS STANDARDS

Emissions Parameter	Limit	Citation
Destruction and Removal Efficiency (DRE)	≥99.99%	40 CFR 63.1203(c)(1)
PCDDs/PCDFs	≤0.20 ng/dscm TEQ basis	40 CFR 63.1219(a)(1)(i)
HCl/Cl_2	≤ 32 ppmv dry as HCl	40 CFR 63.1219(a)(6)
Mercury	≤ 130 µg/dscm	40 CFR 63.1219(a)(2)
Semi volatile Metals (SVM)	≤ 230 µg/dscm	40 CFR 63.1219(a)(3)
Low Volatile Metals (LVM)	≤ 92 µg/dscm	40 CFR 63.1219(a)(4)
Totals Hydrocarbons	≤ 10 ppmv	40 CFR 63.1219(a)(5)(ii)
Particulate Matter (PM)	≤ 0.013 gr/dscf or 34 mg/dscm	40 CFR 63.1219(a)(7)

TABLE 2 – OPERATING PARAMETERS

Process Parameter (Tag ID)	Units	Avg. Period	Basis	Limit
Minimum Feed Lance Atomization Pressure[1]	Psig	Instant.	Mfg. Rec.	30
Maximum SCC Pressure (PT-4307 & PT-4308)	In. w.c.	Reference September 4, 2003 letter from US EPA Region 5 concerning this requirement.		
Maximum Temperature at ESP Inlet (TI-6002A/B)	°F	1-hr	CPT	424
Maximum Pumpable Waste Feed Rate (WQI-9000T)	Lb/hr	1-hr	CPT	29,926
Maximum Total Waste Feed Rate (WQI-9000F)	Lb/hr	1-hr	CPT	35,069
Minimum Kiln Temperature (TI-4300A/B)	°F	1-hr	CPT	1,718
Minimum SCC Temperature (TI-4310A/B)	°F	1-hr	CPT	1,747
Maximum Process Gas Flow rate (FI-7510A/B)	Scfm	1-hr	CPT	67,505
Minimum Loc. 1 Carbon Feed Rate (WI-7003)	Lb/hr	1-hr	CPT	[redacted]
Minimum Loc. 2 Carbon Feed Rate (WI-7002)	Lb/hr	1-hr	CPT	[redacted]
Minimum Loc. 1 Carbon Feed Pressure (PI-5732)	Psig	1-hr	CPT	3.0

[1] Each liquid lance has a pressure switch. When the pressure drops below 30 psig on any lance the feed from that lance will be automatically cutoff. Tag Ids : PSL-3113 (High BTU), PSL-3123 (Organic), PSL-3143 (Aqueous), PSL-3133 (Sludge), PSL-3153 (Slurry), and PSL-3100A/B (Sludge 2).

Process Parameter (Tag ID)	Units	Avg. Period	Basis	Limit
Minimum Loc. 2 Carbon Feed Pressure (PI-7132)	Psig	1-hr	CPT	3.0
Maximum Ash Feed Rate (WQI-9000AH)	Lb/hr	12-hr	CPT	10,333
Minimum Ring Jet Pressure Drop (DPI-7401)	in. w.c.	1-hr	CPT	28.0
Minimum Scrubber (1st and 2nd Packed Bed, combined) Liquid Flow Rate (FQI-7201)	gpm	1-hr	CPT	1,287
Minimum Scrubber (Ring Jet) Liquid Flow Rate (FI-7404A/B)	gpm	1-hr	CPT	446
Minimum Scrubber (Ring Jet) Blowdown (FI-7403)	gpm	1-hr	CPT	19.5
Minimum Scrubber (Ring Jet) Tank Level (LIC-7401)	feet	1-hr	CPT	1.7
ESP Parameters	The ESP is operating with all fields available with set points of 45,000 volts and 90 sparks per minute, each field; and minimum current of 100 milliamps, each field (see US EPA letters dated Dec. 10 and Dec. 27, 2003).			
Minimum Scrubber (1st and 2nd Packed Bed, combined) Feed Pressure	in. w.c.	1-hr	Mfg. Rec.	Not Req'd.
Minimum Scrubber (1st and 2nd Packed Bed) Pressure Drop	in. w.c.	1-hr	Mfg. Rec.	1.3
Minimum Scrubber (3rd Stage) Liquid pH (AI-7307A/B)	pH units	1-hr	Prior Testing	7.6
Maximum Total Chlorine Feed Rate (WQI-9000CL)	Lb/hr	12-hr	Prior Testing	2,032
Maximum Total Semi volatile Metals Feed Rate (WQI-9000SV)	Lb/hr	12-hr	Prior Testing	83.2
Maximum Total Low Volatile Metals Feed Rate (WQI-9000LV)	Lb/hr	12-hr	Prior Testing	400
Maximum Total Pumpable Low Volatile Metals Feed Rate (WQI-9000PLV)	Lb/hr	12-hr	Prior Testing	400
Maximum Total Mercury Feed Rate (WQI-9000M)	lb/hr	12-hr	Prior Testing	0.14
Stack THC (AI-7850)	ppmv	1-hr	Regulatory Requirement	<10

Monitoring Equipment Information

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Power -ESP Field #1	Environmental Elements Controller	0 – 500 ma	EI-6700	**6/5/2014**	N/A
Power -ESP Field #2	Environmental Elements Controller	0 – 500 ma	EI-6710	**6/5/2014**	N/A
Power -ESP Field #3	Environmental Elements Controller	0 – 750 ma	EI-6720	**6/5/2014**	N/A
Scrubber Second Packed Bed Liquid PH	Electro-Chemical Devices	0 – 14 pH units	AT-7307A	**Performed Weekly**	± 5% of range
Scrubber Second Packed Bed Liquid PH	Electro-Chemical Devices	0 – 14 pH units	AT-7307B	**Performed Weekly**	± 5% of range
Scrubber 2nd Packed Bed Differential Pressure	Rosemount Transmitter /Pressure transducer	0 – 8 in w.c.	DPT-7307	**6/12/2014**	± 2% of range
Pumpable Feed Rate High BTU Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3110	**6/16/2014**	± 10% of range
Pumpable Feed Rate Organic Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3120	**6/16/2014**	± 10% of range
Pumpable Feed Rate Sludge Lance	Positive displacement pump (calculation)	0 – 15,000 lb/hr	FT-3130	**Not Applicable (calculation)**	N/A
Pumpable Feed Rate Aqueous Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3140	**6/16/2014**	± 10% of range
Pumpable Feed Rate Slurry Lance	Positive displacement pump (calculation)	0 – 15,000 lb/hr	FT-3150	**Not Applicable (calculation)**	N/A
Scrubber First Packed bed flow rate	PolySonics Doppler Flow	0 – 1,500 gpm	FT-7204A	**6/17/2014**	± 10% of range

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Scrubber First Packed bed flow rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7204B	**6/17/2014**	± 10% of range
Scrubber Second Packed bed flow rate	PolySonics Doppler Flow	0 – 1,500 gpm	FT-7304A	**6/17/2014**	± 10% of range
Scrubber Second Packed bed flow rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7304B	**6/17/2014**	± 10% of range
Ring Jet Blow Down	Panametrics Ultrasonic Flow	0 – 500 gpm	FT-7403A	**6/17/2014**	± 10% of range
Ring Jet Blow Down	Panametrics Ultrasonic Flow	0 – 500 gpm	FT-7403B	**6/17/2014**	± 10% of range
Scrubber Ring Jet Liquid Flow Rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7404A	**6/17/2014**	± 10% of range
Scrubber Ring Jet Liquid Flow Rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7404B	**6/17/2014**	± 10% of range
Ring Jet Vessel Level	Rosemount Transmitter/ Pressure	0 – 5 feet	LT-7401A	**6/12/2014**	± 2% of range
Ring Jet Vessel Level	Rosemount Transmitter/ Pressure	0 – 5 feet	LT-7401B	**6/12/2014**	± 2% of range
Kiln Inlet Shroud (differential) Pressure (reference to SCC)	Rosemount Pressure transducer	0 - 10 in. w.c.	PDT-4305	**6/11/2014**	± 2% of range
Kiln Outlet Shroud (differential) Pressure (reference to SCC)	Rosemount Pressure transducer	0 - 10 in. w.c.	PDT-4306	**6/12/2014**	± 2% of range
Kiln Inlet Shroud Pressure (reference to ambient)	Rosemount Pressure transducer	0 - 10 in. w.c.	PT-4307	**6/12/2014**	± 2% of range
Scrubber 1st Packed Bed Differential Pressure	Rosemount Transmitter /Pressure transducer	0 – 8 in w.c.	PDT-7207	**6/12/2014**	± 2% of range

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Ring Jet Differential Pressure	Rosemount Transmitter/ Pressure	0 – 40 in w.c. (changed 2005)	PDT-7401A PDT-7405A	**6/12/2014**	± 2% of range
Ring Jet Differential Pressure	Rosemount Transmitter/ Pressure	0 – 40 in w.c. (changed 2005)	PDT-7401B PDT-7405B	**6/11/2014**	± 2% of range
Sludge 2 Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3100A	**6/11/2014**	± 5% of range
Sludge 2 Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3100B	**6/11/2014**	± 5% of range
High Btu Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3113	**6/11/2014**	± 5% of range
Organic Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3123	**6/11/2014**	± 5% of range
Sludge Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3133	**6/11/2014**	± 5% of range
Aqueous Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3143	**6/11/2014**	± 5% of range
Slurry Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3153	**6/11/2014**	± 5% of range
Kiln / Secondary Combustion Chamber Pressure	Rosemount Transmitter / Pressure transducer	-3.5 - +2.5 in. w.c.	PT-4300A	**WFCO Test done every 3 weeks**	± 2% of range
Kiln / Secondary Combustion Chamber Pressure	Rosemount Transmitter / Pressure transducer	-3.5 - +2.5 in. w.c.	PT-4300B	**WFCO Test done every 3 weeks**	± 2% of range
Spray Dryer Carbon Carrier Fluid Pressure	Rosemount Transmitter / Pressure	0 – 15 psi	PT-5732	**6/11/2014**	± 2% of range
Scrubber Carbon Carrier Fluid Pressure	Rosemount Transmitter / Pressure	0 – 15 psi	PT-7132	**6/11/2014**	± 2% of range

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
ESP Inlet Temperature	Rosemount Transmitter / Thermocouple	0 - 600 °F	TT-6002A	**WFCO Test done every 3 weeks**	± 2% of range
ESP Inlet Temperature	Rosemount Transmitter / Thermocouple	0 - 600 °F	TT-6002B	**WFCO Test done every 3 weeks**	± 2% of range
Kiln Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4300A	**1/29/2014**	± 1% of range
Kiln Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4300B	**8/23/2013**	± 1% of range
Secondary Combustion Chamber Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4310A	**7/22/2013**	± 1% of range
Secondary Combustion Chamber Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4310B	**3/25/2014**	± 1% of range
Pumpable Feed Rate Direct Drum Scale A	Generic Load Cell (Loss in weight calculation)	0 – 5,000 lb	WT-3050	**5/10/2014**	± 3% of range
Pumpable Feeds Direct Drum Scale B	Generic Load Cell (Loss in weight calculation)	0 – 5,000 lb	WT-3055	**5/10/2014**	± 3% of range
Pumpable FeedsTanker Scale A (South Bay)	Generic Load Cell. Loss in weight calculation	0 – 80,000 lb	WT-3060	**5/10/2014**	± 3% of range
Pumpable Feeds Tanker Scale B (East Bay)	Generic Load Cell. Loss in weight calculation	0 – 100,000 lb	WT-3065	**5/10/2014**	± 3% of range
Conveyor Scale Drum Processing	Generic Load Cell (Scale)	0 – 2,000 lb	WT-3070 ARTS Data	**5/10/2014**	± 3% of range
Splitting Scale Drum Processing	Generic Load Cell (Scale)	0 – 5,000 lb	WT-3075 ARTS Data	**5/10/2014**	± 3% of range
Floor Scale Drum Processing Lab Pack	Generic Load Cell (Scale)	0 – 2,000 lb	WT-3080 ARTS Data	**5/10/2014**	± 3% of range

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Kiln Bulk Feed Crane	Generic Load Cell (Scale)	0 – 10,000 lb	WT-3105	**5/10/2014**	± 3% of range
Scrubber Carbon Feed Rate	Generic Load Cell / Loss in Weight Feeder	0 – 50 lb/hr	WT-7002	**5/10/2014**	± 1% of range
Spray Dryer Carbon Feed Rate	Generic Load Cell / Loss in Weight Feeder	0 – 50 lb/hr	WT-7003	**5/10/2014**	± 1% of range
Total Hydrocarbon Analyzer (Stack)	California Analytical Instruments, Inc.	0 – 100 ppm 0 – 500 ppm as Propane	AI-7850A	**6/16/2014**	£ ± 5% of span
Total Hydrocarbon Analyzer (Stack)	California Analytical Instruments, Inc.	0 – 100 ppm 0 – 500 ppm as Propane	AI-7850B	**6/16/2014**	£ ± 5% of span
Stack Oxygen Analyzers (dry)	Ametek	0 – 25 %	AI-7860A	**6/16/2014**	± 1.0% Oxygen
Stack Oxygen Analyzers (dry)	Ametek	0 – 25 %	AI-7860B	**6/16/2014**	± 1.0% Oxygen
Stack Oxygen Analyzers (wet)	Ametek	0 – 25 %	AI-7865A	**6/16/2014**	± 1.0% Oxygen
Stack Oxygen Analyzers (wet)	Ametek	0 – 25 %	AI-7865B	**6/16/2014**	± 1.0% Oxygen
~~Flue Gas Flow Rate~~ (Scrubber Outlet)	~~Calculation~~ Stack - Reheat Flow	0 – 80,000 scfm	FT-7510A	**6/16/2014**	< 15% relative accuracy or < 7.5% of the applicable standard
Flue Gas Flow Rate (Scrubber Outlet)	United Sciences UltraSonic Gas Flow	0 – 80,000 scfm	FT-7510B	**6/16/2014**	< 15% relative accuracy or < 7.5% of the applicable standard
Flue Gas Flow Rate (Stack)	United Sciences UltraSonic Gas Flow	0 – 100,000 scfm	FT-7805A	**6/16/2014**	< 15% relative accuracy or < 7.5% of the applicable standard

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Flue Gas Flow Rate (Stack)	Calculation Process + Reheat Flow	0 – 100,000 scfm	FT-7805B	**6/16/2014**	< 15% relative accuracy or < 7.5% of the applicable standard

C. Emission Data Summary

Complete the following emission data summary table for each affected source: (63.10(e)(3)(vi)(l))

Total duration of excess emission / parameter exceedances (minutes for opacity, hours for gases)

Excess Emissions	Total Duration(min)	Total Operating time of affected source during the reporting period (min)	% Of total source operating time during which excess emissions occurred
Maximum Ash Feed Rate (WQI-9000AH)	0	245,324	0.00%
Maximum Process Gas Flowrate (FI-7510A/B)	0	245,324	0.00%
Maximum Pumpable Waste Feed Rate (WQI-9000T)	0	245,324	0.00%
Maximum SCC Pressure (PI-4300A/B)	0.65	245,324	0.00%
Maximum Temperature at ESP Inlet (TI-6002A/B)	0	245,324	0.00%
Maximum Total Chlorine Feed Rate (WQI-9000CL)	0	245,324	0.00%
Maximum Total Low Volatile Metals Feed Rate (WQI-9000LV)	0	245,324	0.00%
Maximum Total Mercury Feed Rate (WQI-9000M)	0	245,324	0.00%
Maximum Total Pumpable Low Volatile Metals Feed Rate (WQI-9000PLV)	0	245,324	0.00%
Maximum Total Semi volatile Metals Feed Rate (WQI-9000SV)	0	245,324	0.00%
Maximum Total Waste Feed Rate (WQI-9000F)	0	245,324	0.00%
Minimum Feed Lance Atomization Pressure	0	245,324	0.00%
Minimum Kiln Temperature (TI-4300A/B)	0	245,324	0.00%
Minimum Loc. 1 Carbon Feed Pressure (PI-5732)	0	245,324	0.00%

Excess Emissions	Total Duration(min)	Total Operating time of affected source during the reporting period (min)	% Of total source operating time during which excess emissions occurred
Minimum Loc. 2 Carbon Feed Pressure (PI-7132)	0	245,324	0.00%
Minimum Loc. 1 Carbon Feed Rate (WI-7003)	33.86	245,324	0.01%
Minimum Loc. 2 Carbon Feed Rate (WI-7002)	32.56	245,324	0.01%
Minimum Ring Jet Pressure Drop (DPI-7401)	114.17	245,324	0.05%
Minimum SCC Temperature (TI-4310A/B)	20.9	245,324	0.01%
Minimum Scrubber (1st and 2nd Packed Bed) Pressure Drop	0	245,324	0.00%
Minimum Scrubber (1st and 2nd Packed Bed, combined) Liquid Flow Rate (FQI-7201)	133.2	245,324	0.05%
Minimum Scrubber (3rd Stage) Liquid pH (AI-7307A/B)	56.54	245,324	0.02%
Minimum Scrubber (Ring Jet) Blowdown (FI-7403)	0	245,324	0.00%
Minimum Scrubber (Ring Jet) Liquid Flow Rate (FI-7404A/B)	0	245,324	0.00%
Minimum Scrubber (Ring Jet) Tank Level (LIC-7401)	0	245,324	0.00%
THC	2191.86	245,324	0.89%
ESP Controls	267.47	245,324	0.11%
Total Duration	**2851.21**	245,324	**1.16%**

Summary of causes of excess emissions / parameter exceedances (% of total duration by cause):

TYPE	Sum Of Duration	% of Total Duration
Startup/shutdown	0	0.00%
Control Equipment Problems	261.3	9.16%
Process Problems	897.61	31.48%
Other unknown causes	1199.28	42.06%
Other known causes	493.02	17.29%
	2851.21	100.00%

D. CMS Performance Summary

Complete the following CMS performance summary table for each affected source: (63.10(e)(3)(vi)(J))

Total duration of CMS downtime[1]
0 minutes

Total operating time of affected source during the reporting period
245,324 min

Percent of total source operating time during which CMS were down
0.00 %

[1] Heritage Thermal Services maintains redundant CMS equipment in most cases to prevent CMS downtime. There were no periods during this time that this redundancy did not prevent CMS downtime.

Summary of causes of CMS downtime (percent of downtime by cause)	Minutes
Monitoring equipment malfunctions	0
Non-monitoring equipment malfunctions	0
Quality assurance / quality control calibrations	0
Other known causes	0
Other unknown causes	0

E. CMS, Process, or Control Changes

1. Have you made any changes in CMS, processes, or controls since the last reporting period?
   ☐ Yes ☒No (if no, end of form) (63.10(2)(3)(vi)(K))
2. If you answered yes, please describe the changes below:

END OF REPORT

bcc: Env. Dept
Stewart Fletcher
Bob Buchheit
Kevin Lloyd

file name: environ/MACT/HWC MACT/exceedances/semiannual2014a

ECF: 2014/MACT/ Semiannual A